

# **Genesis**

## **Variable Speed Jig Saw Operator's Manual**

Scie sauteuse à vitesse variable  
Manuel d'utilisation

Sierra de vaivén de velocidad variable  
Manual del Operario



GJS450

# Variable Speed Jig Saw Operator's Manual

## 4.5 Amp

### Specifications:

- Model: GJS450
- Rated Power: 120V~/60Hz, 4.5 Amp
- No Load Speed: 500- 3,000 SPM
- Orbital Action: 4 Stage
- Blade Type: T-Shank
- Cutting Capacity In Wood: 2-1/2" (65 mm)
- Cutting Capacity in Steel: 5/16" (8 mm)

Includes: Rip Guide, Three Blades (Wood, Plastic, and Steel-Cutting), Vacuum Adaptor and Allen Wrench.

**⚠ WARNING:** To reduce the risk of injury, user must read and understand this operator's manual before operating this tool. Save this Manual for future reference.

**Toll-Free Help Line: 1-888-552-8665**



### ⚠ WARNING:

The Operation of any power tool can result in foreign objects being thrown into your eyes, which can result in severe eye damage. Before beginning tool operation, always wear safety goggles or safety glasses with side shields and a full face shield when needed. We recommend Wide Vision Safety Mask for use over eyeglasses or standard safety glasses with side shields. Always wear eye protection which is marked to comply with ANSI Z87.1.



**Look for this symbol to point out important safety precautions. It means attention!!! Your safety is involved.**

## GENERAL SAFETY RULES

### ⚠ WARNING:

**Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:**

- lead from lead-based paints,
- crystalline silica from bricks and cement and other masonry products, and
- arsenic and chromium from chemically treated lumber.

**Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.**

**⚠ WARNING: READ AND UNDERSTAND ALL WARNINGS, CAUTIONS AND OPERATING INSTRUCTIONS BEFORE USING THIS EQUIPMENT.** Failure to follow all instructions listed below may result in electric shock, fire and/or serious personal injury.

## SAVE THESE INSTRUCTIONS

### WORK AREA SAFETY:

- **Keep your work area clean and well lit.** Cluttered benches and dark areas invite accidents.
- **Do not operate power tools in explosive atmospheres**, such as in the presence of flammable liquids, gases, or dust. Power tools create sparks which may ignite the dust or fumes.
- **Keep bystanders, children, and visitors away while operating a power tool.** Distractions can cause you to lose control.

### ELECTRICAL SAFETY

- **Power tool plugs must match the outlet.** Never modify the plug in any way. Do not use any adapter plugs in any earthed (grounded) power tools. Double insulated tools are equipped with a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install a polarized outlet. Do not change the plug in any way. Double insulation eliminates the need for the three wire grounded power cord and grounded power supply system.
- **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- **Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is grounded.
- **Do not abuse the cord.** Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts. Damaged cords increase the risk of electric shock.
- **When operating a power tool outside, use an extension cord suitable for outdoor use.** These cords are rated for outdoor use and reduce the risk of electric shock.
- **Do not use AC only rated tools with a DC power supply.** While the tool may appear to work. The electrical components of the AC rated tool are likely to fail and rate a hazard to the operator.

### PERSONAL SAFETY

- **Stay alert**, watch what you are doing and use common sense when operating a power tool. Do not use tool while tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating power tools may result in serious personal injury.
- **Use safety equipment.** Always wear eye protection. Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection for appropriate conditions will reduce personal injuries.

- **Dress properly.** Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts. Air vents may cover moving parts and should be avoided.
- **Avoid accidental starting.** Ensure the switch is in the off position before plugging in. Carrying power tool with your finger on the switch or plugging in power tools that have the switch on invites accidents.
- **Remove any adjusting keys or wrenches before turning the power tool on.** A wrench or key that is left attached to a rotating part of the tool may result in personal injury.
- **Do not overreach.** Maintain proper footing and balance at all times. Loss of balance can cause an injury in an unexpected situation.
- **If devices are provided for connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of these devices can reduce dust related hazards.
- **Do not use a ladder or unstable support.** Stable footing on a solid surface enables better control of the tool in unexpected situations.
- **Keep tool handles dry, clean and free from oil and grease.** Slippery handles cannot safely control the tool.

## TOOL USE AND CARE

- **Secure the work piece.** Use clamp or other practical way to hold the work piece to a stable platform. Holding the work piece by hand or against your body is unstable and may lead to loss of control.
- **Do not force the power tool.** The tool will perform the job better and safer at the feed rate for which it is designed. Forcing the tool could possibly damage the tool and may result in personal injury.
- **Use the correct power tool for the job.** Don't force the tool or attachment to do a job for which it is not designed.
- **Do not use tool if switch does not turn it on or off.** Any tool that cannot be controlled with the switch is dangerous and must be repaired or replaced by an authorized service center.
- **Turn power tool off, and disconnect the plug** from the power source and/or battery pack from the power tool before making any adjustments, changing the accessories, or storing the tools. Such preventive safety measures reduce the risk of an accidental start up which may cause personal injury.
- **Store idle tool out of reach of children and other inexperienced persons.** It is dangerous in the hand of untrained users.
- **Maintain power tools with care.** Check for proper alignment and binding of moving parts, component breaks, and any other conditions that may affect the tool's operation. A guard or any other part that is damaged must be properly repaired or replaced by an authorized service center to avoid risk of personal injury.
- **Use recommended accessories.** Using accessories and attachments not recommended by the manufacturer or intended for use on this type tool may cause damage to the

tool or result in personal injury to the user. Consult the operator's manual for recommended accessories.

- **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- **Feed the work piece in the correct direction and speed.** Feed the work piece into a blade, cutter, or abrasive surface against the direction of the cutting tool's direction of rotation only. Incorrectly feeding the work piece in the same direction may cause the work piece to be thrown out at high speed.
- **Never leave the tool running unattended, turn the power off.** Do not leave the tool until it comes to a complete stop.
- **Never start the power tool when any rotating component is in contact with the work piece.**

### **WARNING:**

**USE OF THIS TOOL CAN GENERATE AND DISBURSE DUST OR OTHER AIRBORNE PARTICLES, INCLUDING WOOD DUST, CRYSTALLINE SILICA DUST AND ASBESTOS.** Direct particles away from face and body. Always operate tool in a well-ventilated area and provide for proper dust removal. Use dust collection system wherever possible. Exposure to the dust may cause serious and permanent respiratory or other injury, including silicosis (a serious lung disease), cancer, and death. Avoid breathing the dust, and avoid prolonged contact with the dust. Allowing dust to get into your mouth or eyes, or lay on your skin may promote absorption of harmful material. Always use properly fitting NIOSH/OSHA approved respiratory protection appropriate for dust exposure, and wash exposed areas with soap and water.

### **SERVICE**

- **Have Your Power Tool Serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.
- **Service Your Power Tool periodically.** When cleaning a tool, be careful not to disassemble any portion of the tool since internal wires may be misplaced or pinched.

### **WARNING:**

**READ AND UNDERSTAND ALL WARNINGS, CAUTIONS AND OPERATING INSTRUCTIONS BEFORE USING THIS EQUIPMENT.** Failure to follow all instructions listed below may result in electric shock, fire and/or serious personal injury.

## **SAVE THESE INSTRUCTIONS**

## EXTENSION CORDS

**Grounded tools require a three wire extension cord.** Double insulated tools can use either a two or three wire extension cord. As the distance from the power supply outlet increases, you must use a heavier gauge extension cord. Using extension cords with inadequately sized wire causes a serious drop in voltage, resulting in loss of power and possible tool damage. Refer to the table shown below to determine the required minimum wire size.

The smaller the gauge number of the wire, the greater the capacity of the cord. For example: a 14-gauge cord can carry a higher current than a 16-gauge cord. When using more than one extension cord to make up the total length, be sure each cord contains at least the minimum wire size required. If you are using one extension cord for more than one tool, add the nameplate amperes and use the sum to determine the required minimum wire size.

### Guidelines for Using Extension Cords

- If you are using an extension cord outdoors, be sure it is marked with the suffix “W-A” (“W” in Canada) to indicate that it is acceptable for outdoor use.
- Be sure your extension cord is properly wired and in good electrical condition. Always replace a damaged extension cord or have it repaired by a qualified person before using it.
- Protect your extension cords from sharp objects, excessive heat, and damp or wet areas.

Recommended Minimum Wire Gauge for Extension Cords (120 Volt)

Nameplate Amperes (At Full Load)	Extension Cord Length					
	25 Feet	50 Feet	75 Feet	100 Feet	150 Feet	200 Feet
0–2.0	18	18	18	18	16	16
2.1–3.4	18	18	18	16	14	14
3.5–5.0	18	18	16	14	12	12
5.1–7.0	18	16	14	12	12	10
7.1–12.0	18	14	12	10	8	8
12.1–16.0	14	12	10	10	8	6
16.1–20.0	12	10	8	8	6	6

## SPECIFIC SAFETY RULES FOR JIG SAWS

**⚠ WARNING: DO NOT LET COMFORT OR FAMILIARITY WITH PRODUCT (GAINED FROM REPEATED USE) REPLACE STRICT ADHERENCE TO PRODUCT SAFETY RULES.** If you use this tool unsafely or incorrectly, you can suffer serious personal injury!

**⚠ WARNING: Hold tool by insulated gripping surfaces when performing an operation where cutting tools may contact hidden wiring or its own cord. Contact with a “live” wire will make exposed metal parts of the tool “live” and shock the operator!**

- **Avoid cutting nails**, inspect work piece for any nails and remove them before operation.
- **Do not cut hollow pipe.**
- **Check for the proper clearance** beyond the work piece before cutting so that the blade will not strike the floor, work bench, and etc.
- **Make sure the blade is NOT contacting the work piece** before the switch is turned on.

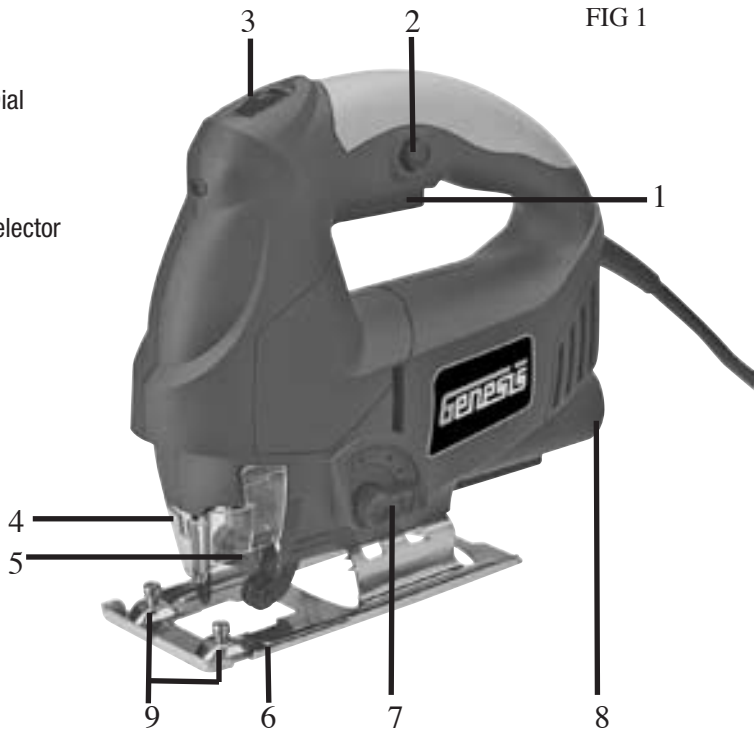
- **Do not leave the tool running.** Operate the tool only when hand-held.
- **Do not touch the blade or the work piece immediately after operation;** it may be extremely hot and could burn your skin.
- **Always switch off and wait for the blade to come to a complete stop** before removing from the work piece.
- **Keep hands away from the moving parts.**
- **Some material contains chemicals which may be toxic.** Take caution to prevent dust inhalation and skin contact. Follow material supplier safety data.
- **Always hold the tool firmly in your hands** before switching the tool “ON”.
- **Wear eye and hearing protection.** Always use safety glasses with side shields. Unless otherwise specified, everyday glasses provide only limited impact resistance, they are not safety glasses. Use only certified safety equipment; eye protection equipment should comply with ANSI z87.1 standards. Protective hearing equipment should comply with ANSI s3.19 standards.
- **Protect your lungs.** Wear a face or dust mask if the operation is dusty. Following this rule will reduce the risk of personal injury.

**⚠ WARNING: USE OF THIS TOOL CAN GENERATE AND DISBURSE DUST OR OTHER AIRBORNE PARTICLES, INCLUDING WOOD DUST, CRYSTALLINE SILICA DUST AND ASBESTOS.** Direct particles away from face and body. Always operate tool in a well-ventilated area and provide for proper dust removal. Use dust collection system wherever possible. Exposure to the dust may cause serious and permanent respiratory or other injury, including silicosis (a serious lung disease), cancer, and death. Avoid breathing the dust, and avoid prolonged contact with the dust. Allowing dust to get into your mouth or eyes, or lay on your skin may promote absorption of harmful material. Always use properly fitting NIOSH/OSHA approved respiratory protection appropriate for dust exposure, and wash exposed areas with soap and water.

## **SAVE THESE INSTRUCTIONS**

## YOUR JIG SAW

1. Switch Trigger
2. LOCK-ON Button
3. Variable Speed Dial
4. Chip Shield
5. Blade Collet
6. Base
7. Orbital Setting Selector
8. Vacuum Port
9. Rip Guide Slots



## Unpacking and Content

**IMPORTANT:** Due to modern mass production techniques, it is unlikely the tool is faulty or that a part is missing. If you find anything wrong, do not operate the tool until the parts have been replaced or the fault has been rectified. Failure to do so could result in serious personal injury.

## Contents in Package:

Description	QTY
Jig Saw	1
Rip Guide	1
T-Shank Blades	3
Vacuum Adaptor	1
Allen Wrench	1
Operator's Manual	1



## OPERATION

**⚠ WARNING:** Always check that the power supply corresponds to the voltage on the rating name plate.

### SWITCH ACTION

**⚠ WARNING:** Always be sure that the tool is switched off and unplugged before adjusting or checking function on the tool. Switch can be locked in “ON” position for ease of operator comfort during extended use. Use caution when locking tool in “ON” position and maintain a firm grasp on the tool.

Your jig saw is equipped with an “ON/OFF” switch trigger which is operated by squeezing or releasing.

- **To start the tool**, simply pull the switch trigger.
- **To stop the tool**, release the switch trigger.

### Using with the “Lock-On” button:

Your jig saw is also equipped with a “Lock-On” button, located on the left side of the saw's handle just above the switch trigger. Using the “Lock-On” button allows the saw to be run continuously without the operator having to constantly apply pressure to the switch trigger.

- **To start the tool and run the tool continuously**, pull the switch trigger then push in the “Lock-On” button and release the switch trigger.
- **To unlock the switch**, pull the switch trigger fully and release it.

**⚠ WARNING:** If the “Lock-On” button is continuously being depressed, the trigger cannot be released.

### TO INSTALL OR REMOVE THE SAW BLADE

**⚠ WARNING:** Always be sure that the tool is switched off and unplugged before adjusting, adding accessories, or checking a function on the tool

**CAUTION:** Always clean out all chips or foreign matter adhering to the blade and/or blade holder. Failure to do so may cause insufficient tightening of the blade, resulting in a serious personal injury. Do not touch the blade or the workpiece immediately after operation; they may be extremely hot and could burn your skin. Always secure the blade firmly. Insufficient tightening of the blade may cause blade breakage or serious personal injury.

#### To install the blade:

1. Position the chip shield up to allow access to the Blade Collet.
2. Open the Blade Collet by rotating the (Spring Loaded) Collet Lever clockwise.
3. With the blade teeth facing forward, insert the blade into the Blade Collet as far as it will go.
4. Check to make sure the back edge of the blade is positioned properly in the groove of the roller guide.
5. Release the Collet Lever. The blade should now be secured in the Blade Collet.
6. Lower the chip shield completely.



FIG 2  
BLADE COLLET  
COLLET LEVER  
ROLLER GUIDE

**To remove the blade:**

1. Position the Chip Shield up to allow access to the Blade Collet.
2. Open the Blade Collet by rotating the (Spring Loaded) Collet Lever clockwise.
3. Pull the blade out from the Blade Collet.
4. Release the Collet Lever.

**CAUTION:** Always cut with the Chip Shield down and hold the base flush with the workpiece. Failure to do so may cause blade breakage, resulting in a serious injury.

**SPEED ADJUSTMENT DIAL**

Your jig saw is equipped with a speed adjusting dial located on the upper, forward portion of the saw's handle. Tool speed can be infinitely adjusted between 500 and 3,000 strokes per minute by rotating the adjusting dial. Speed indicators appear on the dial as the numbers 1 through 6: 1 is the slowest saw speed and number 6 represents the highest speed. Therefore, higher speed when the dial is rotated towards number 6 speed increases; lower speed is obtained when the dial is rotated in the direction of number 1. The speed adjusting dial can be operated while the saw is running or when the saw is not operating. The operator has the ability to preset the saw's speed by rotating the dial to the desired setting and then fully depressing the switch trigger, turning the saw on for use. Please note: regardless of pressure applied on the trigger, the tool will not operate any faster than the maximum speed setting selected. Be aware that when the jigsaw is operated at low speed the motor temperature will begin to rise due to the slower speed of the internal cooling fan. In such cases, it is necessary to occasionally run the tool at full speed for a few minutes to aid internal cooling to keep the motor operating at high efficiency.

The jig saw cutting speed (or stroke rate) required depends on the material being cut, the type of blade being used, and the feed rate used by the operator. The best speed for a particular application is largely based on operator experience or experimentation. However, as a general rule, slower speeds are for denser materials and faster speeds for soft materials. Saw blade life is also largely determined by the motor speed and the type of material being cut. The following chart is intended as a guideline only; test cuts in scrap should be performed first to determine the best speed setting.

<b>Workpiece being cut</b>	<b>Adjusting dial number</b>
Wood	4 – 6
Mild Steel	3 – 6
Stainless Steel	3 – 4
Aluminum	3 – 6
Plastics	1 – 4

The speed adjusting dial can be turned only as far as 6 and back to 1. Do not force it past 6 or 1, doing so may cause the speed adjusting function to no longer function properly.

**SELECTING THE ORBITAL CUTTING ACTION**

This jigsaw can be operated in the conventional straight line (up and down) mode or with an "orbital" cutting action. During orbital cutting, the blade is thrust forward on the upward (cutting) stroke, greatly increasing cutting speed. During the down stroke, the blade is cleared of accumulated debris, enhancing cutting efficiency and extending blade life by causing the blade to run cooler. The orbital action adjustment switch is located on the lower left hand portion of the motor housing near the chip deflector. The motor housing is marked: 0, I, II, III. The "0" designates the straight-line mode. "I" through "III" designate increasing levels of orbital action. Just as with blade speed, selecting the proper orbital action is largely a matter of operator experience and experimentation on scrap. The chart shown below is intended as a guideline only.

**Position Cutting Action Applications**

0	Straight-line	For clean cuts in wood and plywood. For cutting mild steel, stainless steel, and plastics.
I	Small orbit	For cutting mild steel, aluminum, and hard wood.
II	Medium orbit	For cutting wood and plywood.
III	Large orbit	For fast, aggressive cutting in wood and plywood.

**VACUUM ADAPTOR**

Your Jig Saw comes with a vacuum adaptor. This attachment allows you to connect it to a standard 1-1/4" vacuum hose.

**To connect the vacuum adaptor to the tool**, align the two tabs on the narrow end of the vacuum adaptor with the corresponding slots on the back of the jig saw just below the power cord restraint. Insert it in and rotate counter-clockwise to lock it.

**APPLICATION****BLADE SELECTION**

To obtain the best performance from the saw, it is important to select a specific blade for the particular application and type of material you wish to cut. By doing this you will get a smoother, faster cut and prolong blade life.

**NOTE: This tool is designed to work with T-shank blades. Other types of saw blades are not guaranteed to work properly and may come loose from the tool.**

**GENERAL CUTTING**

**CAUTION: Always hold the base flush with the workpiece. Failure to do so may cause blade breakage, resulting in a serious injury.**

**Jig saws cut on the upstroke.** It causes the work piece surface facing upwards to splinter. Therefore, determine the "good" side of your work piece, and place your guidelines for cutting on the opposite side. Properly support and clamp the workpiece with the "good" side down, and with the guidelines clearly visible and unobstructed (above & below) the surface to be cut.

**To start the cut**, place the front edge of the saw base on the workpiece and align the blade with the previously drawn guideline. Make sure the blade does not contact the workpiece. Turn the saw on, wait for the blade to reach full speed and slowly move the blade into the work piece. Apply only enough downward pressure to keep the saw steady on the workpiece and only enough forward pressure to keep the blade cutting.

**EDGE GUIDE CUTTING**

Your jig saw is equipped with a Rip Guide. It can be used for making cross cuts and rip cuts.

**To install the rip guide**

1. Use Allen wrench provided, loosen the two screws at the front of the base.
2. Insert the rip guide arm through two slots (9-FIG 1) with scale side up.
3. Adjust rip guide to the desired width and lock in place by tightening the two screws.

**BEVEL CUTTING**

Bevel cutting angles may be adjusted from 0° to 45° right or left. Angles for cuts from 0° to 45° in 15° increments are marked on a scale on both the left and right side of the base.

**To adjust the bevel cutting angles**

1. Using Allen wrench provided, loosen the two base pivot screws until the base can be moved.

2. Slide base backward until base pivot screws can move freely in the grooves in base.
3. Align the mark, on the base, of the desired angle with the edge of motor housing.
4. Once desired angle is reached, slide base forward to engage stop slots to notches on housing, tighten the base pivot screws securely.

**NOTE:** For angles other than the preset 15° increments, the stop notches at the front of the base are not used.

## INTERIOR CUTOUTS

An interior cutout is needed when a cutting pattern is located in the work piece without a lead-in cut from an edge. These cuts can be performed using one of two methods: either using starting holes or by plunge cutting.

### Using starting holes

Within the cutout pattern, pre-drill one or more holes larger than saw blade being used. Then insert the blade through the hole(s) to start your cut.

### Using plunge cutting

**⚠ WARNING:** To avoid loss of control, broken blades, or damage to the material being cut, always use extreme caution when making plunge cuts. We do not recommend plunge cutting on materials other than wood.

When using the plunge cutting method, a starting hole or lead in cut from the work piece edge is not necessary. It is best to practice plunge cutting on scrap wood so the operator becomes familiar with the technique.

1. Set the speed at 5 or 6 and orbital setting to III.
2. Tilt the saw forward so that it rests on the front edge of the base with the blade point positioned just above the work piece surface.
3. Make sure the blade is inside the area to be cut.
4. Apply downward pressure to the tool so that the front edge of the base will not move when you turn on the tool.
5. Turn on the tool and gently lower the back end of the saw until the blade contacts the work surface.
6. As the blade pierces the workpiece, slowly lower the base of the tool down onto the workpiece surface until it is in the normal cutting position.
7. Complete the cut in the normal manner.

## SCROLL CUTTING

Scroll cuts can be made with the jig saw by guiding the direction of the cut with applied pressure on the handle.

**⚠ WARNING:** Excessive side pressure to the blade could result in broken blades or damage to the material being cut.

## MAINTENANCE

### CLEANING

Avoid using solvents when cleaning plastic parts. Most plastics are susceptible to damage from various types of commercial solvents and may be damaged by their use. Use clean cloths to remove dirt, dust, oil, grease, etc.

**⚠ WARNING: Do not at any time let brake fluids, gasoline, petroleum-based products, penetrating oils, etc., come in contact with plastic parts. Chemicals can damage, weaken or destroy plastic which may result in serious personal injury.**

Electric tools used on fiberglass material, wallboard, spackling compounds, or plaster are subject to accelerated wear and possible premature failure because the fiberglass chips and grindings are highly abrasive to bearings, brushes, commutators, etc. Consequently, we do not recommend using this tool for extended work on these types of materials. However, if you do work with any of these materials, it is extremely important to clean the tool using compressed air.

### LUBRICATION

This tool is permanently lubricated at the factory and requires no additional lubrication.

## TWO-YEAR WARRANTY

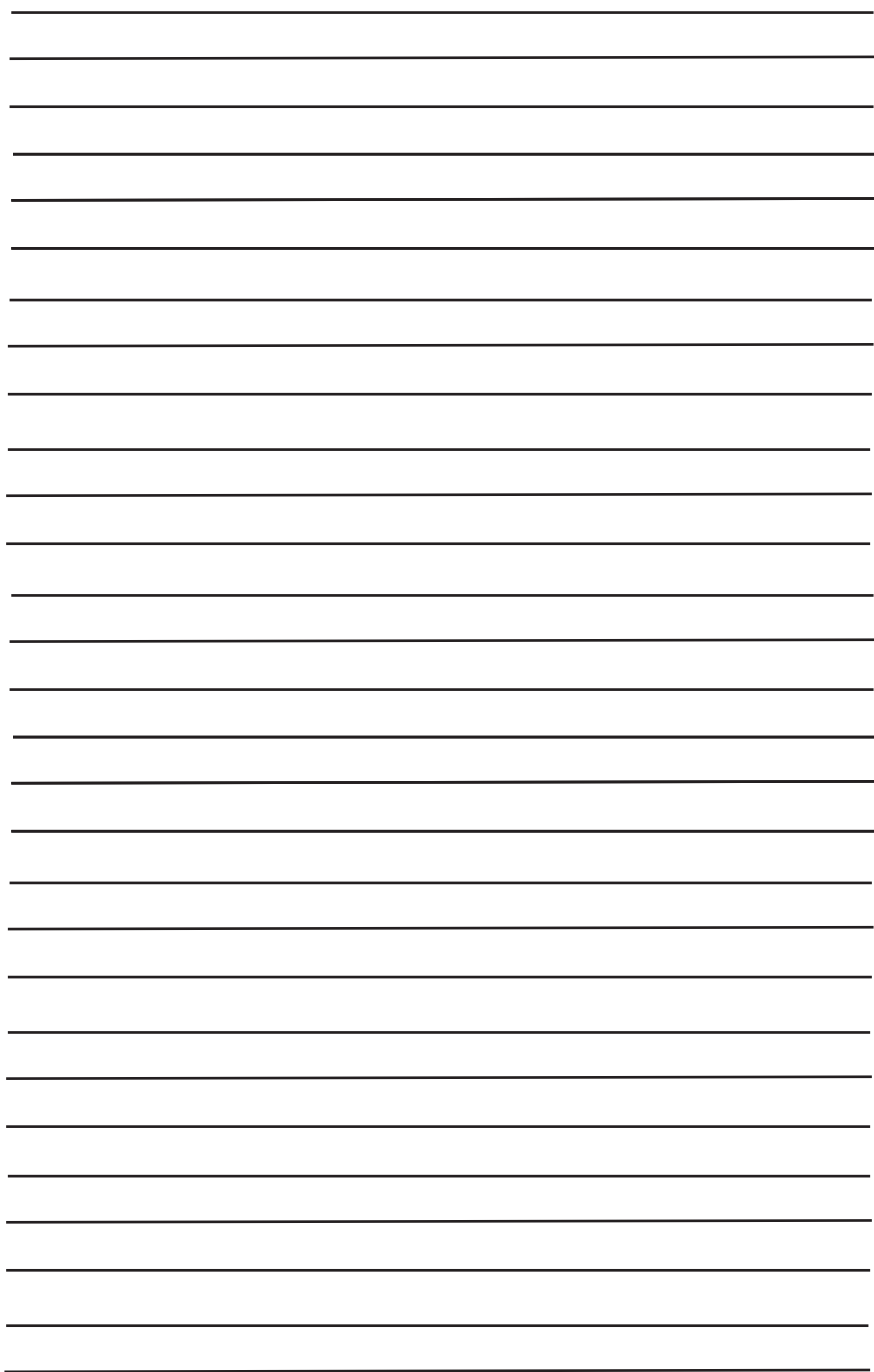
This product is warranted free from defects in material and workmanship for 2 years after date of purchase. This limited warranty does not cover normal wear and tear or damage from neglect or accident. The original purchaser is covered by this warranty and it is not transferable. Prior to returning your tool to store location of purchase, please call Toll-Free Help Line for possible solutions. ***THIS PRODUCT IS NOT WARRANTED IF USED FOR INDUSTRIAL OR COMMERCIAL PURPOSES.***

## TOLL-FREE HELP LINE

For questions about this or any other GENESIS Product, please call Toll-Free: **888-552-8665**.

Or visit our website: **[www.richpowerinc.com](http://www.richpowerinc.com)**





***Genesis***

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